# A STUDY OF EFFECT OF "HOLE IN THE WALL" EXPERIMENT OF COMPUTER LITERACY ON ATTITUDE OF VILLAGE STUDENTS TOWARDS USING CYBER RESOURCES,LEVEL OF CONSCIOUSNESS AND SOCIAL AWARENESS

**A**
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## 1.0.0 Introduction

Now a days computers are being used in every field of life including education. Home computers are used for playing videogames at home. The doctor diagnose diseases with cent percent accuracy with the help of the computers. Even in the big hospitals computers are being used for installing the management system. Sonography, scanning and inner body testing can be made easier with the help of computers. In the production of architectural design, models of buildings and to get the hard copy of printing, computers help a lot. They are also used in research work in various areas of economic, population growth studies, family planning, Psychology and others. Computers are playing a vital role in composing music and generating the actual sound of instruments and voice of human beings.

The computers are used for educational and managerial purposes when we talk about computer education it is known literacy. It is defined as the knowledge and ability to use computers and related technology efficiently, with a range of skills covering levels from elementary use to programming and advanced problem solving. Computer literacy can also refer to the comfort level someone has with using computer can excess programs and other applications that are associated with computers. Another valuable component of computer literacy is knowing how to operate computers and its applications. Having basic computer skills is a significant asset in the developed countries.

The precise definition of "computer literacy" can vary from group to group. Generally, literate (in the realm of books) connotes one who can read any arbitrary book in their native language, looking up new words as they are exposed to them. Likewise, an experienced computer professional may consider the ability to self-teach (i.e. to learn arbitrary new programs or tasks as they are encountered) to be central to computer literacy. In common discourse, however, "computer literate" often connotes little more than the ability to use several very specific applications (usually Microsoft Word, Microsoft Internet Explorer, and Microsoft Outlook) for certain very well-defined simple tasks, largely by rote. (This is analogous to a child claiming that they "can read" because they have rote-memorized several small children's books. Real problems can arise when such a "computer literate" person encounters a new program for the first time, and large degrees of "hand-holding" will likely be required.) Being "literate" and "functional" are

generally taken to mean the same thing. .They are also used for drilling and practicing tutorials by the students. They are used for simulation and instructional games, pen pencils and brushes are now being replaced by specialized drawing institution. They can be used for many allied jobs that are to be carried on every day.Though modern society is being more and more dependent on information technology in general ,there is need to develop self study device which can supplement the class room teaching so Moggery (1993) said that the challenges and problems faced by the modern educational system can be changed with the help of computers.

As a scientist Dr Sugta Mitra visited many school where he watched every thing very closely .and he said that many programme are being done for education like inclusive education, adult education etc. but when talk about the out pot of the programme we say that students are not able or taking interest in the programme . Minimally Invasive Education in school adduces there are many reasons why children have difficulty learning in , especially when the learning is imposed and the subject is something the student is not interested in, a frequent occurrence in modern schools. Schools also label children as "learning disabled" and place them in special education even if the child does not have a learning disability, because the schools have failed to teach the children basic skills.

Minimally Invasive Education in school asserts there are many ways to study and learn. It argues that learning is a process you do, not a process that is done to you. The experience of schools holding this approach shows that there are many ways to learn without the intervention of teaching, to say, without the intervention of a teacher being imperative. In the case of reading for instance in these schools some children learn from being read to, memorizing the stories and then ultimately reading them. Others learn from cereal boxes, others from games instructions, others from street signs. Some teach themselves letter sounds, others syllables, others whole words. They adduce that in their schools no one child has ever been forced, pushed, urged, cajoled, or bribed into learning how to read or write, and they have had no dyslexia. None of their graduates are real or functional illiterates, and no one who meets their older students could ever guess the age at which they first learned to read or write. In a similar form students learn all the subjects, techniques and skills in these schools. Every person, children and youth included, has a different learning style and pace and each person, is unique, not only capable of learning but also capable of succeeding. These schools assert that applying the medical model of

problem-solving to individual children who are pupils in the school system, and labeling these children as disabled—referring to a whole generation of non-standard children that have been labeled as dysfunctional, even though they suffer from nothing more than the disease of responding differently in the classroom than the average manageable student—systematically prevents the students' success and the improvement of the current educational system, thus requiring the prevention of academic failure through intervention. This, they clarify, does not refer to people who have a specific disability that affects their drives; nor is anything they say and write about education meant to apply to people who have specific mental impairments, which may need to be dealt with in special, clinical ways. Describing current instructional methods as homogenization and lockstep standardization, alternative approaches are proposed, such as the Sudbury model schools, an alternative approach in which children, by enjoying personal freedom thus encouraged to exercise personal responsibility for their actions, learn at their own pace rather than following a chronologically-based curriculum.

He emphasis on the importance of creative programme that can help the students in the self leaning process . He also says that the present age is known as technological age and. We can not make any programme with out computers so computers are very useful in every field of life even if the rate of computers literacy in India is very low because of the attitude of the people and their awareness. In advanced cities people are very aware about the importance of computer and its literacy. In this field the well known program conducted by Dr Sugtra mittra is the Hhole In the Wall computer litracy program . Dr. Sugata Mitra, Chief Scientist at NIIT, was credited with the discovery of Hole-in-the-Wall. As early as 1982, he had been toying with the idea of unsupervised learning and computers. Finally, in 1999, he decided to test his ideas in the field. On 26th January, Dr. Mitra's team carved a "hole in the wall" that separated the NIIT premises from the adjoining slum in Kalkaji, New Delhi. Through this hole ,a freely accessible computer was put up for use.This computer proved to be an instant hit among the slum dwellers, especially the children age group 6 to 12 years. With no prior experience, the children learnt to use the computer on their own. This prompted Dr. Mitra to propose the following hypothesis:

The acquisition of basic computing skills by any set of children can be achieved through incidental learning provided the learners are given access to a suitable computing facility, with entertaining and motivating content and some minimal (human)guidance.

Encouraged by the success of the Kalkaji experiment, freely accessible computers were set up in Shivpuri (a town in Madhya Pradesh) and in Madantusi (a village in Uttar Pradesh). These experiments came to be known as Hole-in-the-Wall experiments. The findings from Shivpuri and Madantusi confirmed the results of Kalkaji experiments. It appeared that the children in these two places picked up computer skills on their own. Dr. Mitra defined this as a new way of learning. After this program many other conducted the various program about this field in urban areas but no one can think about the remote areas where the people and children do not know the computer, its importance and its use in the real life. So they are unable to do many work of their life and they have to be dependent upon others help.

Inspired by this program Dayal Bagh Educatinal Instutute (deemed university) in its NSS program is organizing medical camp for village people along with Hole in the wall experiment of computer literacy program . On the same line DEI faculty of education has also conducted this program in the session 2011-12 for a nearly school in Nagle Haweli.

### 1.1.0 Emergence of the problem

As we know that in the modern age we can not do any work in proper way without computer knowledge and awareness in education and social field. So we have to make some effort to develop some programs by which students or children can learn themelves . When the researcher came to know about Hole in the Wall program, he made some efforts to know more about this and visited this experiment in the medical camp. Inspired by the above mentioned program of computer literacy for village children the researcher thought to study the effect of this program on the various cognitive and non cognitive attributes of children. In the favor of his insight the researcher reviewed the literature and found the following studies related to computer education.

**Table 1.1.0 showing the previous researches related to the topic**

| S.N | year | Researcher | Title |
|---|---|---|---|
| 1 | 1990 | Bhardwaj,Raj | Development of computer aided instructional material on microbes for class $6^{th}$ |
| 2 | 1992 | Andhikari | Development of computer aided instructional material on cell and cell reproduction for class $6^{th}$ |
| 3 | 1993 | Stella,Jocvin | Study the impact of computer assisted learning material development on the topic 'The language of sets' |
| 4 | 1995 | Devis, Ovidue | Prepared a teaching model where in the computers were used in place of teachers |
| 5 | 1995 | Carol | Study the effect computer literacy of cognitive variables. |
| 6 | (2007) | Mitra, S. | Can Kids Teach Themselves? |

The review of related literature leads to the conclusion that most of the computer related studies aim at improving teaching learning strategies but none could show the effect of hole in the wall experiment of computer literacy on consciousness, attitude of students towards using cyber resources and social awareness. Thus the researcher under took the study to find out the effect of computer literacy of village students in the title of which can be stated a follows.

### 1.2.0 Statement of the problem

**A Study of effect of 'Hole in the wall' experiment of computer literacy on attitude of village students towards using cyber resources, level of consciousness and social awareness.**

### 1.3.0 Justification of the problem

In the present age we see that the technology is playing an important role in every sector of our life so we have to give the high wattage to those learning strategies which can make a marvelous effect on the learning process of the students. In foreign country a lot of work is being done to improve the condition of education system. As far as India is

concerned, very little work has been done in the field of computer education. Work regarding to the computer in education is still in experimental stage. In order to extend computer literacy program and to appear a background for instruction of elective computer courses at the high level , in various stages many secondary schools have been equipped with computer sets with the active assistance of Govt. of India and other agencies like I.I.T . Many facilities are provided for necessary training of advanced training to the teachers, with a view that in turn ,they would provide computer training to the students in their respective schools. In this field I.I.T Delhi started 'Hole in the wall Program' and this program is also being done in DEI along with the medical camp on Sundays for village students. The researcher visited the camp which gave insight the researcher to do some efforts to know the effect on cognitive and non cognitive variables on the village students and the usefulness of this program . After that the researcher studied many studies related to the computer literacy program and found that Many researches that have been conducted, in this field does not show the effect of computer literacy on cognitive and non cognitive variables. So the researcher is motivated to study the effect of 'Hole in the wall' experiment of computer literacy on attitude of village students towards using cyber resources , level of consciousness and social awareness.

### 1.4.0 Definition of the term employed or used

### 1.4.1 Cyber

"Cyber" is a prefix used to describe a person, thing, or idea as part of the computer and information age.

In the present study cyber will be used as a resource by which the students can get some knowledge through computer in "Hole in the Wall "program.

### 1.4.2 Computer literacy

It is defined as the knowledge and ability to use computers, related technology efficiently, with a range of skills covering levels from elementary use to programming and advanced problem solving.

In the study by computer literacy, I mean what we adults define as computer literacy: The ability to use the mouse, to point, to drag, to drop, to copy, and to browse the Internet. So

the researcher will provide M.S. Office and internet on the provided computers to operate the functions of M.S. office and internet according to their interest.

### 1.4.3 'Hole in the wall' experiment

Hole in the wall" experiment is program of computer literacy in which the computer is fitted in the boundary wall and the village students are allowed to use computers and gain basic knowledge.

As we want to see the effect of the programme on cognative and non cognative variables in the study. we know that every aspects of our life are varied by doing some deeds either they are good or bad. In the same way our attitude is varied. On the basis of the experiment conducted for children age group of 6 - 12 years on 26 January in 1999 at Kalka Ji in Delhi, It is said, If the students get new knowledge and idea from different ways, their way of thinking and attitude are improved as the ratio of providing facilities .On the basis of psychology it can be said that the practical method of teaching is better than the lecture method of teaching. this programme allow the students to get knowledge of their own way which will modify the attitude of the students.

### 1.4.4 Consciousness (awareness)

The term is impossible to define except in terms that are unintelligible without a grasp of what consciousness means. Many fall into the trap of equating consciousness with self-consciousness. it is only necessary to be aware of the external world. Consciousness is a fascinating but elusive phenomenon: it is impossible to specify what it is, what it does, or why it has evolved. But in general we can say that consciousness is awareness, aware to know that you know. It is composite of feelings, thoughts, and emotions in various dimensions

### 1.4.5 Social awareness

Social awareness is the active process of seeking out information about what is happening in the communities around us. A greater awareness of social norms and problems leads to better understanding and better solutions.

In education system the schools are called the small society because values of the society are developed in the schools. When we asked the question what are the values of the

society which are developed in the behaviour of the students, we are compelled to think about the awareness because in the schools we developed the awareness in the form of values. When they enter in the real society, they want to be more awared with world. the main motives of this experiment is to provide the new way to be awared them selves

### 1.5.0 Objectives of the study

1 To study the village student's attitude towards using cyber resources.

2 To study the level of consciousness of village students.

3 To study the social awareness of village students.

4 To study the effect of Hole in the wall computer literacy program on attitude of village students towards using cyber resources.

5 To study the effect of Hole in the wall computer literacy program on level of consciousness of village students.

6 To study the effect of Hole in the wall computer literacy program on social awareness of village students .

**Secondary Objective**s

1 To study the effect of Hole in the wall experiment of computer literacy program of boys and girls on attitude towards using cyber resources.

2 To study the effect of Hole in the wall experiment of computer literacy program of boys and girls on level of consciousness.

3 To study the effect of Hole in the wall experiment of computer literacy program of boys and girls on social awareness.

### 1.6.0 Hypotheses of the study

1 There will be no significant effect of "Hole in the wall" experiment of computer literacy on attitude of village students towards using cyber resources

2 There will be no significant effect of "Hole in the wall" experiment of computer literacy on attitude of boys and girls towards using cyber resources.

3 There will be no significant effect of "Hole in the Wall' experiment of computer literacy on level of consciousness of village students.

4 There will be no significant effect of "Hole in the Wall' experiment of computer literacy on level of consciousness of boys and girls.

5 There will be no significant effect of "Hole in the Wall' experiment of computer literacy on social awareness of village students.

6 There will be no significant effect of "Hole in the Wall' experiment of computer literacy on social awareness of boys and girls.

### 1.7.0 Delimitation of the study

The present study will be delimited to 50 village students of VI$^{th}$ standard age group of 10 to 13. in village tundli , tehsil Tundla, District Firozabad.

### 1.8.0 Variables of the study

In this study there are three dependent variables and one independent variable.

**1.8.1 Independent Variables**- Hole in the wall experiment of computer literacy.

**1.8.2 Dependent Variables**-Level of consciousness, Attitude towards using cyber resources and social awareness.

### 1.8.3 Control of extraneous variables:

The extraneous variance will be control by identification of effective variables and using effective strategy of control which has been shown in the table-2:

**Table2: Possible Extraneous Variable and Techniques of Control**

| Extraneous Variable | Technique of Control |
|---|---|
| ***A. Subject relevant variable*** | |
| **1. Age** | Constancy(10-13) |
| **2. Motivation** | Constancy |

| | |
|---|---|
| ***B. situation relevant variables*** | |
| **1. Temperature** | Constancy |
| **2. Humidity** | Constancy |
| **3. Noise** | Elimination |
| **4. Lighting level** | Constancy |
| **5. Time of the study** | Constancy |
| **6. Culture** | Constancy |
| ***C. Sequence relevant variables*** | |
| **1. Practice** | Elimination |
| **2. Fatigue** | Elimination |

### 1.9.0 Method of the study

Experimental method of research will be used in present study. According to *John W. Best (2001),* **"***Experimental research is the description and analysis of what will be or what will occur under carefully controlled conditions."*

Experimental research provides for much control and therefore, establishes a systematic and logical association between manipulated factors and observed effects. The researcher defines a problem and purposes a tentative answer or hypothesis. The researcher tests the hypothesis and accepts or rejects in the light of the controlled variable relationship that he has observed. These assumptions are based upon the Law of the single variable. John Stuart Mill (1846) defined this law in his work *Methods of Experimental Inquiry*.

**1.10. Design of the study:** In the present study the researcher will use the pretest - posttest experimental research design. The design of the study can be seen under the following table .

Table 1.2 showing the design of the study

| | Pre test | | Treatment (Experiment) | Post test | |
|---|---|---|---|---|---|
| Experimental group | 1 | Level of consciousness skill | Experiment will be conducted 3 hours per day for 30 days | 1 | Level of consciousness skill |
| | 2 | Attitude towards using cyber resources skill | | 2 | Attitude towards using cyber resources skill |
| | 3 | Social awareness skill | | 3 | Social awareness skill |

### 1.11. Procedure of the study

Procedure of the study will be completed under the following phases.

Table 1.3 showing the procedure of the study

| | |
|---|---|
| Planning phase | Preparation of tools |
| Intervention phase | Program of schedule |
| Evaluating phase | Pre test – post test evaluation |

### 1.11.1 Planning phase

In this phase the researcher will select the standard tools and construct one tool. The tools will be selected to study the attitude towards using cyber resources and level of consciousness and self-constructed tool to study the social awareness**.**

### 1.11.2 Intervention phase

In this phase the researcher will make a schedule for the experiment. In the experiment the researcher will select the suitable place where all the conditions are available which are required to apply the experiment. After this he will give the tools to the students to fill and then he apply the experiment. In the experiment the researcher will provide 4 computers for 50 students for 3 hours per day. This experiment will be continuing for 30 days. After the 30 days the researcher will give the post test to the student s to fill.

### 1.11.3 Evaluating phase

In the end of the experiment the researcher will evaluate the score of the pre test and post of the tools and study the effect of the experiment on the dependent variables of the study

### 1.12.0 Sample of the study

A sample of 50 students age group of 10 to 13 will be randomly selected in village tundli, Tehsil tundla, District Firozabad . In the sample the researcher will select 25 boys and 25 girls.

### 1.13.0 Tools used in the study

In the present study the researcher will use two standard and one self-made tool.

1.13.1 Attitude towards using cyber resources scale prepared by Dr. S.Rajshaker will be used .

1.13.2 Level of consciousness scale prepared by Ovidue Barzadu. Will be used

1.13.3 Self constructed social awareness scale will be used.

### 1.14.0 Statistical techniques

In the present study the researcher will use descriptive and inferential statics.

1.14.1 Descriptive Statistical techniques - Mean and Standard deviation.

1.14.2 Inferential Statistical techniques - Mann Whiteny (U- test).

### 1.15.0 Significance of the study

As we know that any work conducted in private or government sector will be useful for some group that can be get benefits in their relative fields. As Sugtra Mittra started his experiment in Kalkaji New Delhi He started this experiment because he know that the students learn by enjoying personal freedom thus encouraged to exercise personal responsibility for their actions. We have to emphasis on the importance of creative programme that can help the students in the self leaning process. He also says that the present age is known as technological age and. We can not make any programme with out computers so computers are very useful in every field of life even if the rate of computers literacy in India is very low because of the attitude of the people and their awareness. In advanced cities people are very aware about the importance of computer and its literacy. If the students get new way of learning the make them selves very aware in every field of life and the schools are trying to make the students aware . so that they can do any work in any situation in the real life . in the same the result of the present will help in improving

the awareness of the students ,. This experiment will improve the knowledge of the students better than the class room teaching because in the present experiment students learn by their own efforts that will be more stable .It made a marvelous effect in the cognitive development of the slum Children. Later this program was expended by many organizations due to its usefulness in the educational and other training programs. In this way the researcher will do this experiment in remote area for the poor students to explore new knowledge for their betterment. And the result of the study will lead the researcher to make a better program for the learning of the students and the results of the study will be useful for the improvement of computer literacy program. They are also be useful for the school administration because the can use them in class room teaching with the computer and can see the effect of the program on different skills of the students. These results are also significant for those NGO which are organizing such type of program for the students. They can also be used by some soft ware companies to develop the different types of programs for school teaching . We can suggest some ideas to the government in this field.

## BIBLIOGRAPHY


Andhikari (1992),Development of computer aided instructional material on cell reproduction for class 6th ,Amerind Publihing house , New Delhi.

Baars, B. J. (1988). A Cognitive theory of Consciousness. New York: Cambridge University Press.

Bhardwaj Raj (1990),Development of computer aided instructional material in microbes for class 6th ,Shree publication and Distribution , New Delhi.

Carol(1995), Study the effect of computer litracy of cognitive variables , Dissertation Abstract International, vol-7

Devis Obidue (1995),Prepared a teaching model where the computers were used in the place of teachers, Prentence Hall of India, New Delhi.

Georg, A (2007): The great comtinuum of consciousness,journal of NCERT, New Delhi.

Mathur, Vineeta(2009), Grades of Consciousness: A system Prespective, journal of NCERT, New Delhi.

Metha P.H. and Kanada,H.M. (1965): A survey of school guidance service, NCERT,New Delhi

Progress of Radhaswami Satsang (Dayal bagh) and Satsang Institution (2002-2012),Anover view Radha Swami Satsang Dayal bagh , Agra .

Setlla jocvin (1993), Study the impact of computer assisted learning material development on the topic the language of sets , Dissertation Abstract International Vol-7

Mitra, S. (2007) Talks: Sugata Mitra shows how kids teach themselves (video – 20:59). Can Kids Teach Themselves? Sugata Mitra's "Hole in the Wall" and Minimally Invasive Education (MIE) experiments have shown that, in the absence of supervision or formal teaching, children can teach themselves and each other, if they're motivated by curiosity. Retrieved August 30, 2010.